

2003
CARL MOYER MEMORIAL
AIR QUALITY STANDARDS ATTAINMENT PROGRAM
REQUEST FOR PROPOSALS

AQMD RFP #P2004-04

The South Coast Air Quality Management District (AQMD) requests proposals for the following purpose according to terms and conditions attached. In the preparation of this Request for Proposals (RFP) the words "Proposer," "Applicant," "Contractor," and "Consultant" are used interchangeably.

SECTION I – OVERVIEW

PURPOSE

The AQMD is seeking proposals for the 2003 Carl Moyer Memorial Air Quality Standards Attainment Program (CMP). The primary purpose of this program is to provide financial incentives to assist in the purchase of low-emission heavy-duty engine technologies to achieve near-term NO_x (Oxides of Nitrogen) emission reductions from these sources. In addition, the California Air Resources Board (CARB) requires the AQMD to show a 25 percent reduction of particulate matter (PM) emissions for its overall program. As such, AQMD will estimate PM emission reductions for individual projects using the same methodology as is used for a project's NO_x reduction calculation.

INTRODUCTION

In 1998, then Governor Wilson and the California State Legislature, through the budget process, authorized incentive funding for low-emission heavy-duty engines. The CMP is administered by CARB. The program is named after the late Dr. Carl Moyer, in recognition of his work in the air quality field, and his efforts in bringing about this incentive program.

This is the fifth year of the CMP. The purpose of the CMP is to help speed the introduction of low-emission, heavy-duty engines. Over the past four years, funding for the CMP has been provided through the state legislature. This year funding will be provided by Proposition 40, the California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act which was passed in the spring of 2002. Proposition 40 allocates \$50 million to CARB for distribution to air districts for projects that positively "affect air quality in state and local parks and recreation areas" in accordance with the CMP guidelines. Governor Davis has elected to distribute this funding over the next two years, thus guaranteeing funding for the CMP through 2004. This year with \$8,148,088 in new funds and \$4,217,606 in rollover and turnback funds from previous year the CMP provides \$12,365,694 for low-emission vehicle and equipment projects in the South Coast Air Basin.

All proposals must meet minimum requirements as stated in CARB's "The CMP Guidelines," as revised in March 2003, and any additional AQMD criteria as stated in this RFP and its appendices. Potential applicants should carefully read the RFP and its associated appendices for each applicable category. In the case of any conflict between CARB guidelines and AQMD criteria, the more stringent criteria will prevail.

GENERAL PROGRAM INFORMATION

The primary focus of the CMP is to achieve emission reductions from heavy-duty vehicles and equipment operating in California as early and as cost-effectively as possible. Projects should be designed to ensure that the emission reductions expected through the deployment of low-emission engines or retrofit technologies under this program are real, surplus, and quantifiable.

All emission reductions resulting from funded projects will be retired by the AQMD as part of meeting State Implementation Plan air quality attainment goals. To avoid double counting of emission reductions, project vehicle and/or equipment may not receive funding from any other government grant program that is designed to reduce mobile source emissions. Specifically, these programs include:

- All Mobile Source Air Pollution Reduction Review Committee (MSRC) Programs
- All CARB Emission Reduction Credit Programs
- State of California School Bus Program
- AQMD Chairman's School Bus Program
- AQMD Rule 2202 Air Quality Investment Program
- AQMD RECLAIM Air Quality Investment Program for NO_x
- Emission credit programs encompassed in the AQMD Rule 1600-series and 1309.1
- State Emission Mitigation Program

It is noteworthy that CARB has established, as a matter of policy, that CMP funds may be used by public and private entities seeking assistance in meeting AQMD Fleet Rules (referred to as the "1190-series"). However, NO_x reductions obtained through this program must not be required by any other existing regulations (including state or federal), agreements, etc.

In no case will funding exceed \$13,600 per ton of NO_x reduced, though some off-road categories have stricter cost-effectiveness requirements¹. No administrative or vehicle operational costs will be funded.

To be eligible to participate in this program, new alternative fuel vehicles/engines must be certified by the California Air Resources Board to one of CARB's optional NO_x emission credit standards. Alternative fuel engines not certified to CARB's NO_x emission credit standards are not eligible to participate, even if the engines were certified at similar levels previously, or exhibit low NO_x emissions, but are not certified at the credit levels. **As in previous years, AQMD will fund diesel to diesel applications only where CARB certified alternative fueled vehicles/engines are not available. All projects must be operational within 18 months of contract execution.**

It is expected that multiple awards will be granted under this RFP, subject to the approval of the AQMD's Governing Board. Total funding for this RFP is a maximum of \$12,365,694 million.

All proposals will be evaluated based on criteria set forth in this RFP and the attached Appendices. The AQMD will evaluate and/or verify information submitted by the applicant. At AQMD's discretion, consultants to the AQMD may conduct all or part of such evaluation and/or

¹ For some cases, this requirement will result in awards that are below the applicants funding request.

verification. Data verification during the evaluation and contracting process may cause initial cost-effectiveness rankings, and associated awards, to change. Furthermore, the AQMD reserves the right to make adjustments to awards based on the subsequent verification of information as well as changes in cost-effectiveness.

Definitions

Alternative Fuel

Alternative fuels include compressed natural gas (CNG), liquefied natural gas (LNG), methanol, ethanol, propane (LPG), and electric technologies. Dual-fuel technologies such as CNG/diesel, LNG/diesel and electric hybrids are also eligible, as long as they are CARB-certified to the optional standards. Experimental technologies and fuels will be referred to the CARB for evaluation and possible eligibility in the program.

Repower

Vehicle repower refers to replacing an existing engine in an existing vehicle with a newer engine certified to lower emission standards. The replacement engine must be certified for sale in California to a NOx emission standard that is at least 15 percent lower than the original NOx certification level for the engine being replaced. Diesel-to-alternative fuel repowers are eligible for all categories. Diesel-to-diesel repowers will only be considered in the off-road categories.

For vehicle repower projects, the portion of the cost for a vehicle repower project to be funded through the CMP is the difference between the total cost of purchasing and installing the new emission-certified engine and the total cost of rebuilding the existing engine.

Retrofit

Retrofit means making modification to the engine and/or fuel system such that the retrofitted engine does not have the same specifications as the original engine. The engine retrofit kit must be certified to reduce NOx emissions by at least 15 percent compared to the original engine certification level. The retrofit kit must be CARB-certified to achieve the required NOx reductions.

PROGRAM CHANGES FOR 2003

Important changes to the AQMD's 2003 CMP are listed below:

- The cost-effectiveness limit has been increased to \$13,600 per ton of NOx reduced, based on cost-of-living increases allowed under the original CMP legislation.
- Disproportional impact requirements have been included into the CMP guidelines consistent with the legislative requirements of AB1390 (Firebaugh). Specifically, each air district must spend at least 50 percent of their allotted funds to directly benefit communities that are disproportionately impacted by air pollution. AQMD has previously included this requirement in its CMP and no changes are proposed from the previous program.

- Applicants **must** provide vendor quotes with their application to document the incremental cost of implementing the proposed technology. This will require documentation of both the baseline and low-emission project costs. Applicants can request funding up to the full differential cost between a low-emission vehicle/engine/equipment option and its new non-low emission equivalent; however, less may actually be awarded, depending on the results of the cost-effectiveness evaluation.
- Engine emission standards and emission inventories have been updated for each of the categories.
- Projects not explicitly included in the guidelines may be evaluated on a case-by-case basis for CMP eligibility by CARB
- Calculation Methodologies have been updated.
- The capital recovery factors have been recalculated at a rate of 3%.
- AQMD will issue IRS W-9 forms for funds awarded. Note: Carl Moyer Awards are taxable as income.
- All projects must be operational within 18 months of contract execution.

PROGRAM ADMINISTRATION

The CMP will be administered locally by the AQMD through the Science and Technology Advancement office. The applicant is responsible to ensure that all program information, forms etc. are current. Please refer to the Carl Moyer Program at AQMD's website www.aqmd.gov (Clean Air Technologies Section).

FUNDING CATEGORIES

Specific categories of projects have been identified for funding under the AQMD's 2003 CMP solicitation. These categories are:

- On-Road Heavy Duty Vehicles, including but not limited to, on-road trucks, pickup and delivery trucks, refuse haulers, street sweepers and transit buses.
- Off-Road Heavy Duty Equipment/Engines, including but not limited to, construction equipment, marine engines, forklifts, and auxiliary power units and locomotives.

The funding category allocations are provided below in Figure 1. The AQMD reserves the right to reallocate the funds to another category or subcategory. Additionally, the AQMD reserves the right to partially fund a project.

All qualified applications submitted for each category/subcategory will be evaluated for disproportional impacts and ranked by emission reduction cost-effectiveness.

FIGURE 1 – FY 2003 PROPOSED FUNDING AND COST-EFFECTIVENESS

<u>Category</u>	<u>Minimum Amount (\$ millions)</u>	<u>Cost-Effectiveness \$/ton</u>
ON-ROAD		
(A) Trucks		
- Class 7-8	2.5	13,600
- Class 5-6	1.0	13,600
- Other*	2.0	13,600
(B) Buses		
- Transit	2.0	13,600

**Small fleets (20 vehicles or less, with GVW 14,001 lbs. and above), and public sector, APUs.*

OFF-ROAD		
(A) Marine	2.0	5,000
(B) Construction	2.0	6,000
(C) Forklift	1.0	3,100/13,600
(D) Locomotives	2.0	13,600
(E) Other**	No minimum	13,600

***Agricultural engines and ground support equipment*

It is noteworthy that proposals for fuel and engine technologies not certified by CARB, or falling outside the categories specifically discussed in this RFP, will be referred to CARB for determination of CMP eligibility.

SCHEDULE OF EVENTS

Release of RFP	August 1, 2003
All Applications Due by 5:00 pm	October 10, 2003
Awards Proposals to the Board	February 6, 2004

ALL PROPOSALS MUST BE RECEIVED AT THE AQMD HEADQUARTERS NO LATER THAN 5:00 P.M. ON FRIDAY OCTOBER 10, 2003

SCHEDULE OF WORKSHOPS

Thursday, August 7, 2003 – 10:00 a.m.
Redondo Beach Library
303 PCIT – Room A
Redondo Beach, CA 90277

Thursday, August 14, 2003 – 10:00 a.m.
Semptra Energy – Downey ERC
Multi-Purpose Room
9240 E. Firestone Blvd.
Downey, CA 90241

Tuesday, August 19, 2003 – 10:00 a.m.
South Coast AQMD - Auditorium
21865 Copley Drive
Diamond Bar, CA 91765

Tuesday, August 26, 2003 – 10:00 a.m.
Port of Los Angeles
Board Hearing Room
425 S. Palos Verdes Street
San Pedro, CA 90713

Wednesday, August 27, 2003 – 10:00 a.m.
San Gabriel Valley Council of Governments
West Covina City Hall
1444 W. Garvey Avenue
West Covina, CA 91793

Wednesday August 27, 2003 – 1:30 p.m.
Western Riverside COG
Coffee Depot
3204 Mission Inn Ave.
Riverside, CA 92501

Tuesday September 2, 2003 – 8:30 a.m.
Orange County COG
Orange City Hall
300 E. Chapman Ave
Orange, CA 92866

Wednesday, September 3, 2003 – 8:30 a.m.
Small Business Consulting Agency
259 Gentle Springs Lane
Diamond Bar, CA 91765

Tuesday, September 9, 2003 – 8:30 a.m.
Orange City Hall
300 E. Chapman Avenue
Orange, CA 92866

Tuesday, September 9, 2003 – 10:00 a.m.
Port of Los Angeles Auditorium
425 S. Palos Verdes Avenue
San Pedro, CA 90732

Wednesday, September 10, 2003 – 2:30 p.m.
San Bernardino Association of Government
472 N. Arrowhead
San Bernardino, CA 92401

Wednesday, September 17, 2003 – 1:00 p.m.
Santa Clarita, City Hall
23920 Valencia Blvd.
Santa Clarita, CA 91355

Tuesday September 23, 2003 – 1:30 p.m.
UC Irvine
Social Ecology Building I, Room 306
Irvine, CA 92868

Wednesday, October 1, 2003 – 10:00 a.m.
Material Handling Supply, Inc.
12900 Firestone Blvd.
Santa Fe Springs, CA 90670

Postmarks will not be accepted. Faxed or e-mail proposals will not be accepted. Proposers may hand-deliver proposals to the AQMD by submitting the proposal to the AQMD reception desk. The proposal will be date and time-stamped and the person delivering the proposal will be given a receipt.

AQMD may issue subsequent solicitations if insufficient applications are received in the initial solicitation. If additional funding becomes available, either from the Carl Moyer Program or other programs for which these applications will be eligible, projects applying for this solicitation will be considered for additional funds.

STATEMENT OF COMPLIANCE

Government Code Section 12990 and California Administrative Code, Title II, Division 4, Chapter 5, require employers to agree not to unlawfully discriminate against any employee or applicant because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, sex, or age. A statement of compliance with this clause is included in all AQMD contracts.

CONTACT FOR ADDITIONAL INFORMATION

Questions regarding the content or intent of this RFP, procedural matters, or locations of bidder's conferences should be addressed to:

Lani Montojo
Science and Technology Advancement
South Coast Air Quality Management District
21865 East Copley Drive, Diamond Bar, CA 91765
(909) 396-2231/3252 FAX

SECTION II: WORK STATEMENT/SCHEDULE OF DELIVERABLES

All applicants that are selected for funding awards must complete the Work Statement and Schedule of Deliverables described below as part of the contracting process. Development of these materials for the initial application is NOT required; however, applicants must sign the application form indicating their understanding of the requirements for submittal of additional project information to finalize a contract and that all vehicles, engines or equipment must be in operation within 18 months of contract execution. **This form MUST be included in the application, or the application will be deemed ineligible and will NOT be considered for funding.**

WORK STATEMENT

The scope of work involves a series of tasks and deliverables that demonstrate compliance with the requirements of the CMP as administered by CARB and the AQMD. The responsibility for developing detailed project plans that address the program criteria is the project applicant's. In addition, alternative fuel project applicants must discuss their plan for refueling the proposed

vehicles/equipment, and if appropriate, should provide a letter of agreement from their fuel provider (see Application forms).

At a minimum, any contract for funding must demonstrate that the proposed project will meet the following criteria:

- Provide emission reductions that are real, quantifiable, enforceable and surplus in accordance with CARB and AQMD guidelines.
- Meet the cost-effectiveness limits, as described in Figure 1 of this RFP.
- Provide at least 30 percent NOx emission reduction for new engine/vehicle purchases and 15 percent for repowers and retrofits, compared to baseline NOx emissions.
- Commit that project engines operate in-service for a minimum of 5 years and at least 75 percent of annual operation must occur within the AQMD.
- Commit that all vehicles/engines are in operation within 18 months of contract execution.
- Provide for appropriate record-keeping during the life of the funded project (i.e., annual mileage, fuel consumption and/or hours of operation).
- Ensure that the project is in accordance with other local, state, and federal programs, and resulting emission reductions from a specific project are not required as a mitigation measure to reduce adverse environmental impacts that are identified in an environmental document prepared in accordance with the California Environmental Quality Act or the National Environmental Policy Act.
- If requested, be prepared to provide a financial statement and bank reference, or other evidence of financial ability to fulfill contract requirements.
- For third parties submitting applications in response to this RFP on behalf of a client, or partner, please be aware that the third party must have a signed contract with the vehicle owner. A copy of this contract will be required prior to AQMD contract execution.

DELIVERABLES

Selected applicants must also be prepared to describe how the project will be monitored and what type of information will be included in project progress reports. At a minimum, the AQMD expects to receive the following reports:

1. Quarterly status reports until the vehicle or equipment purchase, repower or retrofit, or fueling infrastructure has been accomplished. These reports shall include a discussion of any problems encountered and how they were resolved, any changes in the schedule, and recommendations for completion of the project. These progress reports are required before payment for the purchase, repower or retrofit, or infrastructure will be made.
2. An annual report, for a minimum of 5 years and throughout the project life, which provides the annual miles or hours of operation, where the vehicle or equipment was operated (75 percent required in-Basin), annual fuel consumption, and operational and maintenance issues encountered and how they were resolved. AQMD reserves the right to verify the information provided.

SECTION III: PROPOSAL SUBMITTAL REQUIREMENTS

Proposers must complete the appropriate application forms, which are included in the Appendices, along with the “Contracting Statements” Form, committing that the information

requested in Section II, Work Statement/Schedule of Deliverables will be submitted if the Proposer's project is selected for funding. In addition, Conflict of Interest and Project Cost information, as described below, must also be submitted with the application. It is the responsibility of the proposer to insure that all information submitted is accurate and complete. Use the checklist provided in the Appendices to ensure all application elements are submitted.

CONFLICT OF INTEREST

Applicant must address any potential conflicts of interest with other clients affected by actions performed by the firm on behalf of the AQMD. Although the proposer will not be automatically disqualified by reason of work performed for such firms, the AQMD reserves the right to consider the nature and extent of such work in evaluating the proposal. Conflicts of interest will be screened on a case-by-case basis by the AQMD District Counsel's Office. Conflict of interest provisions of the state law, including the Political Reform Act, may apply to work performed pursuant to this contract. Please discuss potential conflicts of interest on the application form entitled "Contracting Statements".

PROJECT COST

Applicants must provide cost information that specifies the amount of funding requested and the basis for that request by attaching vendor quotes to the application. **The CMP is intended to fund only the differential cost between existing technology and low-emission technology.** The proposed low-emission technology must be CARB-certified². Proposals will be ranked by cost-effectiveness on a vehicle/equipment-by-vehicle/equipment basis. In no case will funding exceed \$13,600/ton of NOx reduced, though some off-road requirements are more stringent. No fueling infrastructure, administrative or vehicle /equipment operational costs will be funded.

All costs must be clearly indicated in the application. In addition, applicants should be sure to include any sources of co-funding and the amount of each co-funding source in their application. Proposers are cautioned that the project life period used in calculating emissions reductions will be used to determine the length of their data reporting obligation. In other words, a project using a ten year life for the emissions reduction calculations will be required to operate the project vehicle for the full ten years. Reporting is automatically required during the first five years of vehicle/equipment operation, and will also be required upon request for the remaining life of the equipment (i.e., the total ten year project life).

While proposers are not required to calculate a project's cost-effectiveness, AQMD strongly recommends this calculation be made by the proposer in order to ensure the project meets cost-effectiveness (\$/ton) limits, and to provide the ability to strategically determine how much funding to request from this program³. Methodologies for calculating cost-effectiveness are provided in the Appendices.

² Note that an experimental permit from CARB may be considered, but the project will require special CARB approval.

³ For example, based on a request for the full incremental cost of a project, an applicant calculates a project's cost-effectiveness (CE) to be \$13,600 per ton. If the applicant requests the full incremental cost, then that applicant will be ranked at \$13,600 per ton. If the applicant were to request less funding than the incremental cost, the resulting cost-effectiveness would improve (for example, \$12,500/ton), providing a better CE ranking for the project.

PROPOSAL SUBMISSION

All proposals must be submitted according to specifications set forth above. Failure to adhere to these specifications may be cause for rejection of the proposal.

Application Forms – Program application forms are provided in the Appendices. These must be completed and submitted with other required documents discussed in the application and below.

Certifications and Representations - Attachment A to this RFP must be completed and submitted with the application. Attachment A consists of three forms: 1) State of Incorporation and Tax Standing, 2) Federal Tax Identification, and 3) EPA Certification.

Due Date - The proposer shall submit **six (6) complete copies of the proposal** in a sealed envelope, plainly marked in the upper left-hand corner with the name and address of the proposer and the words "Request for Proposals #P2004-04." All proposals/applications shall be submitted in an environmentally friendly format: stapled, not bound, black and white print; no three-ring, spiral, or plastic binders, and no card stock or colored paper.

All proposals are due no later than 5:00 p.m., on Friday, October 10, 2003. Postmarks are not accepted. **Faxed or e-mailed proposals will not be accepted.** Proposals must be directed to:

Leticia De La O, Purchasing Supervisor
South Coast Air Quality Management District
21865 East Copley Drive
Diamond Bar, CA 91765

Any correction or resubmission done by the proposer will not extend the submittal due date.

Grounds for Rejection - A proposal may be immediately rejected if:

- It is not prepared in the format described
- It is not signed by an individual authorized to represent the firm

Disposition of Proposals - The AQMD reserves the right to reject any or all proposals. All responses become the property of the AQMD. One copy of the proposal shall be retained for AQMD files. Additional copies and materials will be returned only if requested and at the proposer's expense.

Modification or Withdrawal - Once submitted, proposals cannot be altered without the prior written consent of AQMD. All proposals shall constitute firm offers and may not be withdrawn for a period of ninety (90) days following the last day to accept proposals.

SECTION IV: PROPOSAL EVALUATION/CONTRACTOR SELECTION CRITERIA

AQMD staff will evaluate all submitted proposals and make recommendations to the Governing Board for final selection of project(s) to be funded. Proposals will be evaluated on the cost-effectiveness of NOx reduced on a vehicle/equipment-by-vehicle/equipment basis, as well as a

project's disproportional impact evaluation (discussed below). Be aware that there is a possibility that due to program priorities, cost-effectiveness and/or funding limitations, project applicants may be offered only partial funding, and not all proposals that meet minimum cost-effectiveness criteria may be funded.

In compliance with AB1390 (Firebaugh) at least 50 percent of the CMP funds must be spent in areas that are most significantly impacted by air pollution and are low income or communities of color, or both. CARB has issued broad goals and left the details of how to implement this requirement to each air agency. AQMD will use the following method to meet these requirements.

1. All projects must qualify for the CMP by meeting the cost-effectiveness limits established in the RFP.
2. All projects will be evaluated according to the following criteria to qualify for disproportionate impact funding:
 - a. Poverty Level: All projects in areas where at least 10 percent of the population falls below the Federal poverty level, based on the year 2000 census data, will be eligible to be included in this category, and
 - b. PM Exposure: All projects in areas with the highest 15 percent of PM concentration will be eligible to be ranked in this category. The highest 15 percent of PM concentration is 46 micrograms per cubic meter and above, on an annual average, or
 - c. Toxic Exposure: All projects in areas with a cancer risk of 1,000 in a million and above (based on Mates II estimates) will be eligible to be ranked in this category.

Data for the poverty level and PM and toxic exposures were obtained from the 2000 U.S. Census, the 1998 AQMD monitoring data and Mates II study respectively.

3. Fifty percent of the total 2003 CMP funds will be allocated among proposals located in disproportionately impacted areas. If available funding is not exhausted with the outlined methodology, then staff will return to the Governing Board for direction. If on the other hand, funding requests exceed the available funding levels, then all qualified projects will be ranked for poverty level, PM and toxic exposures. The maximum score will be comprised of 40 percent for poverty level, and 30 percent each for PM and toxic exposures.

All the proposals not awarded under the fifty percent disproportional impact funding will then be ranked according to cost-effectiveness, with the most cost-effective project funded first and then in descending order for each funding category until the remainder of the CMP funds are exhausted.

SECTION V: PAYMENT TERMS

For all projects, except marine vessels, full payment will be made upon installation and commencement of operation of the funded equipment. For marine vessel projects, 20% (see below) of the funds will be withheld to be remitted annually on a sliding scale as described below.

Upon receipt of the annual report, the twenty percent withhold will be decreased according to the following:

Year 1	15% withhold
Year 2	10% withhold
Year 3	7% withhold
Year 4	0% withhold

This Section Applies to all Moyer Applications

PARTICULATE MATTER EMISSION REDUCTION REQUIREMENTS

Particulate matter (PM) baseline levels and calculation methodology are described below. Also a brief overview of available control technologies, the PM target and requirements recommended by the CMP Advisory Board and established by CARB in these revisions, PM emissions reduction calculations, and examples for calculating PM emission reductions are contained herein.

INTRODUCTION

Diesel PM continues to be a serious public health concern. Diesel PM, like ozone, has been linked to a range of serious negative health effects including an increase in respiratory disease, lung damage, cancer, and premature death. Fine diesel particles are deposited deep in the lungs and can result in increased hospital admissions and emergency room visits; increased respiratory symptoms and disease; decreased lung function, particularly in children and individuals with asthma; alterations in lung tissue and respiratory tract defense mechanisms; and premature death. On August 27, 1998, after extensive scientific review and public hearing, the ARB formally identified particulate emissions from diesel-fueled engines as a toxic air contaminant (TAC).

The CMP was originally envisioned to help California meet the NOx emission reduction commitments in measure M4 of the 1994 SIP for ozone. Although the focus of the program continues to be near-term NOx reductions, some of the technologies, such as electric motors and alternative fueled engines, funded by this program also reduce PM emissions. Even without specific requirements for PM emission reductions, the CMP has achieved approximately 100 pounds per day of PM reductions from projects funded in its first year (FY 1998/1999) [ARB March 2002]. Scientific evidence continues to suggest additional adverse health effects associated with the risk of exposure to diesel PM emissions. Thus, PM reductions achieved by an incentive program such as the CMP have become critical.

Advisory Board Recommendations

Section 44297 of the Health and Safety Code created a thirteen-member Advisory Board designated with the responsibility for oversight of the CMP in its early stages. The Advisory Board was asked to provide the Legislature and the Governor a report containing recommendations for the long-term vision of the CMP. The Advisory Board released their report to the Governor and Legislature in March of 2000 [ADVISORY BOARD 2000]. In that report, the Advisory Board recognized that diesel PM is a serious public health concern and PM reductions are necessary throughout California. The Advisory Board established a PM reduction target for the statewide program and a PM reduction requirement for areas designated as serious non-attainment for the federal PM₁₀ (particulate matter less than 10 microns) standard. As a result, ARB incorporated in the CMP guidelines information related to PM emissions to aid in the assessment of PM emission reductions benefits from CMP funded projects.

EMISSIONS INVENTORY AND STANDARDS

Statewide NO_x and PM₁₀ emissions from select categories of heavy-duty engines are shown in Table 1. According to the 2001 inventory, PM emissions statewide from all mobile sources are approximately 123 tons per day. Heavy-duty mobile source engines account for about 65% mobile source emissions of PM statewide. Light and medium-duty vehicles account for about 30%. Currently two air districts, San Joaquin Valley APCD and SCAQMD exceed federal PM₁₀ ambient air quality standards. In general, most districts do not attain California's more stringent state PM standards, leaving millions of Californians exposed to unhealthy levels of ambient PM.

Table 1. Statewide Emissions from Selected Heavy-Duty Engine Categories

Source Category	Current PM ₁₀	2010 PM ₁₀
On-Road Heavy-Duty Vehicle ^a	18	14
Off-Road Equipment ^b	32	25
Locomotive	3	3
Marine	9	10
Total	62	52

a) Emissions from gasoline and diesel trucks and buses. Emissions based on EMFAC2002 model, corrected to account for 2004 and 2007 standards and off-cycle emissions.

b) 2001 emissions from off-road equipment, including equipment less than 50 hp.

Emission Standards

The PM emission factors listed in Tables 2, 3, and 4 represent the EMFAC2002 zero-mile emission factors for diesel-powered medium HDV's, heavy HDV'ss, and urban buses, respectively. Emission factors for school buses and neighborhood refuse are based on GVWR. For alternative-fueled urban transit buses, existing in-use test data shows that PM in-use emissions are 30% to 50% (i.e., a natural gas bus certified to the 0.03 g/bhp-hr PM standard) than for a diesel bus engine certified to the 0.01 g/bhp-hr PM standard. Thus, alternative-fueled urban transit bus projects can use a 0.025 g/mile PM emission factor.

Table 5 provides model year emission factors from the adopted OFFROAD emission inventory model by horsepower group. These off-road emission factors can be used for stationary agricultural irrigation pumps and harbor vessels with medium speed diesel engines. Table 4.2

presented in Chapter 4 lists the PM emission factors for locomotives based on U.S.EPA standards. Tier 0 emission factors should be used for uncontrolled engines.

As discussed in Chapters 2 and 3, the use of California's diesel fuel since 1993 (0.05 percent sulfur content by weight and 10 percent aromatic content by volume) would result in additional NOx and PM emissions from diesel engines compared to the base emission rates. Base emission rates for diesel engines, as embodied in EMFAC2002 and OFFROAD and presented in the above tables, were derived from test data using either federal diesel fuel (0.05 percent sulfur content by weight) or pre-1993 diesel fuel. Thus, a fuel adjustment factor needs to be applied to the base emission rate to more accurately reflect the emissions from diesel engines when those engines are operated using California diesel fuel. Table 6 shows the PM fuel adjustment factors to be used for diesel engines.

**Table 2. PM Emission factors for Medium Heavy-Duty Vehicles
14,001 – 33,000 lbs GVWR**

Model Year	g/mile
Pre - 1984	1.1
1984 - 1986	1.0
1987 - 1990	0.7
1991 - 1993	0.4
1994 - 1997	0.3
1998 - 2002	0.2
2003 - 2006	0.3
2007+	0.03

Table 3 . PM Emission factors for Heavy Heavy-Duty Vehicles 33,000 + lbs GVWR

Model Year	g/mile
Pre - 1975	2.0
1975 - 1983	1.8
1984 - 1986	1.2
1987 - 1990	0.8
1991 - 1993	0.5
1994 - 1998	0.3
1999 - 2002	0.2
2003 – 2006	0.3
2007 +	0.03

Table 4. PM Emission factors for Urban Buses

Model Year	g/mile
Pre - 1987	1.3
1987 - 1990	1.2
1991 - 1993	1.1
1994 - 1995	1.4
1996 - 1998	1.7
1999 - 2002	0.6
2003+	0.1

CONTROL TECHNOLOGIES

A retrofit involves a hardware modification to an existing engine to reduce its emissions from the standards to which it was originally certified. A variety of diesel oxidation catalysts (DOC) and diesel particulate filter (DPF) or traps have been developed for PM emission control. The ARB has recently verified DOC and DPF systems for HD diesel vehicles. DOC's have control efficiencies on the order of 25% while traps can achieve PM reductions of 85% or better.

Table 5. PM Emission factors for Heavy-Duty Off-Road Diesel Engines.

Horsepower	Model Year	g/bhp-hr
50 - 120	Pre - 1988	0.84
	1988 - 2003	0.69
	2004	0.39
	2005	0.29
	2006 - 2007	0.24
	2008 +	0.19
121 - 175	Pre - 1970	0.77
	1970 - 1971	0.66
	1972 - 1987	0.55
	1988 - 2002	0.38
	2003	0.24
	2004	0.19
	2005 - 2006	0.16
	2007 +	0.14
176 - 250	Pre - 1970	0.77
	1970 - 1971	0.66
	1972 - 1987	0.55
	1988 - 1995	0.38
	1996 - 2002	0.15
	2003	0.12
	2004 +	0.11
251 - 500	Pre - 1970	0.74
	1970 - 1971	0.63
	1972 - 1987	0.53
	1988 - 1995	0.38
	1996 - 2000	0.15
	2001	0.12
	2002 +	0.11
501 - 750	Pre - 1970	0.74
	1970 - 1971	0.63
	1972 - 1987	0.53
	1988 - 1995	0.38
	1996 - 2001	0.15
	2002	0.12
	2003 +	0.11
750+	Pre - 1970	0.74
	1970 - 1971	0.63
	1972 - 1987	0.53
	1988 - 1999	0.38
	2000 - 2005	0.15
	2006	0.12
	2007 +	0.11

Table 6 Fuel Correction Factors (Diesel Engines)

Engine Category	Model Year	PM
<i>On-Road</i>	Pre – 1991	0.80
	1991-1993	0.69
	1994+	0.90
<i>Off-Road</i>	Pre-Tier I	0.80
	Tier I +	0.90

In general, DOC's are add-on install-and-forget devices designed for application on pre-1994 model year engines. PM filters are also add-on devices, but require some means of regeneration to dispose of the collected PM. Failure to regenerate or burn off PM can plug the filter, resulting in excessive backpressure on the engine. In addition, cleaning of residual ash deposits is necessary. Excessive PM on the filter can burn, but may result in overheat and filter damage. For this reason, DPF's are retrofits typical for application on 1994 and newer engines. In most applications, the exhaust temperature of a diesel engine is not sufficient for filter regeneration.

Catalyzed DPF's are passive filters that achieve regeneration without external input of energy. In this system, a catalyst induces ignition at typical exhaust temperature encountered during normal operation. The catalyst material is incorporated into the filter system. In addition, a catalyst can be fuel-borne. In several European countries, catalyst-based DPF's have been installed on numerous HDV's and successful demonstrations have been reported extensively in the technical literature. In the U.S., various demonstrations of catalyst-based DPF's have taken place or are in progress. Progressively, fleets and HDV operators are starting to procure these retrofit system not only to comply with recently adopted regulations, but also to voluntarily address potential issues associated with the risk of exposure to diesel exhaust PM. In California, diesel-fueled school buses, transit buses, line-haul trucks, and tanker trucks have been retrofitted with catalyzed DPFs as part of a number of demonstration programs.

PM REDUCTION TARGETS AND REQUIREMENTS

Through a public process, the Advisory Board established the following PM reduction target and requirement:

- A 25% PM emissions reduction target for all participating districts on a statewide program-basis, except for those in serious non-attainment of PM 10 standards.
- A 25% PM emissions reduction requirement for districts designated as serious non-attainment of PM10 federal standards. Currently, SJVAPCD and SCAQMD are the only two districts affected by the proposed requirement. They must reduce PM emissions by 25% district-wide on a CMP program basis (not on a project basis).

EMISSIONS REDUCTIONS

The program C/E continues to be based on NO_x emission reductions. PM emission reductions are determined in a similar fashion to NO_x reductions. If NO_x reductions are based on annual miles traveled, then PM reductions must also be based on annual miles traveled. It is noted that NO_x and PM emissions, both for uncontrolled engines and for emission-certified engines, are not the same. Thus, the reader is urged to exercise caution and use the appropriate emission factors. Baseline PM emission factors were introduced in Tables 9.2 to 9.5 above.

PM reductions on a program basis for the participating districts will be considered to determine compliance with PM reduction goals and requirements.

In addition, a new CMP provision involves the ability of participating districts to use funds under their authority for projects that focus exclusively on PM emission reductions. Funds used for PM-only projects can be used to meet matching fund requirements established by the CMP. Possible projects include retrofits for HD diesel trucks or off-road diesel equipment with ARB verified after-treatment systems. Participating districts without a match requirement cannot use their minimum allocations to fund PM reduction projects. In addition, the C/E criterion of \$13,600/ ton of NO_x reduced required for all CMP projects does not apply for projects focused on PM emission reductions only. ARB staff will work with districts to develop appropriate cost-effectiveness limits for PM. Districts retain the flexibility to propose appropriate allocations for PM reduction projects and are subject to ARB's concurrence.

Emission Reduction Calculations

In order to incorporate the Advisory Board's PM criteria into the CMP, ARB is providing PM emission factors to calculate PM emission reductions from eligible projects. PM emission reductions are determined in the same manner as NO_x emission reductions. ARB determines overall statewide and air district compliance with the PM reduction goals and requirements based on the information provided by the participating districts. ARB retains the authority to make modifications to the program if PM reduction goals and requirements are not on track.

Example 1

On-Road Diesel-to-CNG Repower (Calculations Based on Annual Miles Traveled)

Consider a transit agency faced with the opportunity of replacing a fleet of diesel-fueled buses with 2003 model year CNG fueled buses. The applicant opts to use the annual miles traveled to determine its NO_x emissions reductions. Hence, the vehicle's annual miles traveled will be used to determine the PM emissions reduced.

Baseline PM Emissions:	0.1 g/mile
Adjusted Baseline PM Emissions:	$(0.1 \text{ g/mile})(0.90) = 0.09 \text{ g/mile}$
Reduced PM Emissions:	0.025 g/mile
% Operated in CA:	100%
Annual Miles Traveled:	70,000 miles
Conversion factor:	1 lbs = 454 g

Baseline Engine: $0.09 \text{ g/mile} * 70,000 \text{ miles} * 100\% * \text{lbs}/454 \text{ g} = 13.9 \text{ lbs/year}$

Reduced Engine: $0.025 \text{ g/mile} * 70,000 \text{ miles} * 100\% * \text{lbs}/454 \text{ g} = 3.8 \text{ lbs/year}$

Estimated Annual PM Reductions

$13.9 \text{ lbs/year} - 3.8 \text{ lbs/year} = \mathbf{10.1 \text{ lbs/year PM emissions reduced}}$

Example 2

Locomotive Diesel to Diesel Repower (Calculations Based on Annual Fuel Consumption)

A railroad operator, participating in the CMP, repowers a 1975 model year diesel engine of a switcher with a lower emitting Tier 1 engine. The applicant used the annual fuel consumption of 50,000 gallons/year to determine NO_x emission reductions, and so will use annual fuel consumption to calculate PM reductions. This locomotive operates 100% of its activity in California. Since federal regulations would require locomotive engines originally manufactured

from 1973 to 2001 model years to comply with a Tier 0 PM emission standard of 0.72 g/bhp-hr at the time the of engine rebuild or remanufacture, this value would be used as the baseline emission rate. To qualify for CMP funding, the rebuilt/remanufactured engine will have to comply with, at least, a Tier 1 PM emission standard of 0.54 g/bhp-hr (see Table 4.2 of the locomotives chapter).

Baseline PM Emissions:	0.72 g/bhp-hr
Adjusted Baseline PM Emissions:	$(0.72 \text{ g/bhp-hr})(0.80) = 0.58 \text{ g/bhp-hr}$
Reduced PM Emissions:	0.54 g/bhp-hr
Adjusted Reduced PM Emissions:	$(0.54 \text{ g/bhp-hr})(0.90) = 0.49 \text{ g/bhp-hr}$
Energy Consumption Factor:	20.8 bhp-hr/gal
Annual Fuel Consumption:	50,000 gal/year
% Operated in California:	100%
Conversion factor:	1 lbs = 454 g

Baseline Engine: $0.58 \text{ g/bhp-hr} * 20.8 \text{ bhp-hr/gal} * 50,000 \text{ gal/yr} * 100\% * \text{lbs}/454 \text{ g} = 1,329 \text{ lbs/yr}$

Reduced Engine: $0.49 \text{ g/bhp-hr} * 20.8 \text{ bhp-hr/gal} * 50,000 \text{ gal/yr} * 100\% * \text{lbs}/454 \text{ g} = 1,122 \text{ lbs/yr}$

Estimated Annual PM Reductions

$1,329 \text{ lbs/year} - 1,122 \text{ lbs/year} = \mathbf{207 \text{ lbs/year PM emissions reduced}}$

Example 3

Off-road Diesel-to-Diesel Repower (Calculations Based on Hours of Operation)

A farmer applies for a CMP grant to repower a grape harvester's uncontrolled 1969 diesel engine with at lower NOx and PM emitting model year 2000 remanufactured diesel engine. Both engines are rated at 195 horsepower. If the farmer used 700 annual hours of operation to determine the NOx emissions reductions, then she must also base her PM emission reduction calculation on hours of operation. The project life of the grape harvester is 10 years and it operates 100% in California.

Baseline PM Emissions:	0.77 g/bhp-hr
Adjusted Baseline PM Emissions:	$(0.77 \text{ g/bhp-hr})(0.80) = 0.62 \text{ g/bhp-hr}$
Reduced PM Emissions:	0.15 g/bhp-hr
Adjusted Reduced PM Emissions:	$(0.15 \text{ g/bhp-hr})(0.90) = 0.14 \text{ g/bhp-hr}$
Rated Horsepower:	195 hp
Load Factor:	0.65
Annual Operating Hours:	700 hrs
% Operated in California:	100%
Conversion factor:	1 lbs = 454 g

Baseline Engine

$0.62 \text{ g/bhp-hr} * 195 \text{ hp} * 0.65 * 700 \text{ hrs/year} * 100\% * \text{lbs}/454 \text{ g} = 121 \text{ lbs/year}$

Reduced Engine

$0.14 \text{ g/bhp-hr} * 195 \text{ hp} * 0.65 * 700 \text{ hrs/year} * 100\% * \text{lbs}/454 \text{ g} = 27 \text{ lbs/year}$

Estimated Annual PM Reductions

$121 \text{ lbs/year} - 27 \text{ lbs/year} = \mathbf{94 \text{ lbs/year PM emissions reduced}}$

For areas designated serious non-attainment of the PM10 federal standard, ARB will determine PM emission reductions on a program basis, not a project-to-project basis. Consider the four previous examples as constituting a local district program. These projects yield a total of 385

lbs/year of PM reductions from 1,591 lbs/year of baseline PM emissions. Such a program represents a 24% PM emission reduction and is a little short of the 25% PM emission reduction goal or requirement.

Reporting and Monitoring

Each project category chapter contains monitoring and reporting instructions. PM reporting requirements are included in the minimum information application table of each project category chapter.

SECTION VI: DRAFT CONTRACT

(Provided as example only)

Contract No. *****

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

CONTRACT

This Contract consists of *** pages.

1. PARTIES - The parties to this Contract are the South Coast Air Quality Management District (referred to here as "AQMD") whose address is 21865 E. Copley Drive, Diamond Bar, CA 91765, and *** (referred to here as "CONTRACTOR") whose address is ***.
2. RECITALS
 - A. AQMD is the local agency with primary responsibility for regulating stationary source air pollution in the AQMD in the State of California. AQMD is authorized to enter into this Contract under California Health and Safety Code Section 40489. AQMD desires to contract with CONTRACTOR for services described in Attachment 1 - Work Statement, attached here and made a part here by this reference. CONTRACTOR warrants that it is well-qualified and has the experience to provide such services on the terms set forth here.
 - B. CONTRACTOR is authorized to do business in the State of California and attests that it is in good tax standing with the California Franchise Tax Board.
 - C. All parties to this Contract have had the opportunity to have this contract reviewed by their attorney.
 - D. CONTRACTOR agrees to obtain the required licenses, permits, and all other appropriate legal authorizations from all applicable federal, state and local jurisdictions and pay all applicable fees.

NOW THEREFORE, the Parties agree as follows:

TERMS AND CONDITIONS OF PERFORMANCE

1. AUDIT - CONTRACTOR shall, at least once every two years, or within two years of the termination of the contract if the term is less than two years, be subject to an audit by AQMD or its authorized representative to determine if the revenues received by CONTRACTOR were spent for the reduction of pollution from Motor Vehicles pursuant to the Clean Air Act of 1988. AQMD shall coordinate such audit through CONTRACTOR'S audit staff. If an amount is found to be inappropriately expended, AQMD may withhold revenue from CONTRACTOR in the amount equal to the amount that was inappropriately expended. Such withholding shall not be construed as AQMD's sole remedy and shall not relieve CONTRACTOR of its obligation to perform under the terms of this Contract.
2. TERM - The term of this Contract is from date of contract execution by both parties through completion of the project or June 30, 2001, whichever occurs first unless terminated earlier as provided for in Paragraph 4 below entitled Termination. All requests for payment and associated deliverables must be received by June 30, 2001. Failure to meet this deadline will result in forfeiture of Carl Moyer and/or AQMD Funds. Extensions to this deadline will not be granted. No work shall commence prior to the Contract start date, except at

CONTRACTOR'S cost and risk, and no charges are authorized until this Contract is fully executed.

3. TERMINATION - In the event any party fails to comply with any term or condition of this Contract, this shall constitute a material breach of the Contract. The non-breaching party shall have the sole and exclusive option either to notify the breaching party that it must cure this breach within fifteen (15) days or provide written notification of its intention to terminate this Contract with thirty (30) day's written notice. Notification shall be provided in the manner set forth in Paragraph 21 below, entitled - "Notices." Termination shall not be the exclusive remedy of the non-breaching party. The non-breaching party reserves the right to seek any and all remedies provided by law. AQMD reserves the right to terminate this Contract for non-breach and will reimburse CONTRACTOR for actual costs incurred in performance of this Contract through the effective date of termination for non-breach.

4. INSURANCE - Prior to the start of this Contract, CONTRACTOR shall furnish evidence of workers' compensation insurance in accordance with California statutory requirements and liability insurance with a combined single limit (general and automotive) of One Million Dollars (1,000,000). CONTRACTOR shall maintain such coverage during the term of this Contract and any extensions thereof. AQMD shall be named as an additional insured on such liability policy and thirty (30) days written notice of modification of any such insurance shall be given by CONTRACTOR to AQMD. Such modification is subject to pre-approval by AQMD. If CONTRACTOR fails to maintain the required insurance coverage, AQMD reserves the right to terminate the Contract or purchase such additional insurance and bill CONTRACTOR or deduct the cost thereof from any payments owed to CONTRACTOR.

5. INDEMNIFICATION - CONTRACTOR agrees to hold harmless, defend, and indemnify AQMD, its officers, employees, agents, representatives, and successors-in-interest against any and all loss, damage, cost, or expenses which AQMD, its officers, employees, agents, representatives, and successors-in-interest may incur or be required to pay by reason of any injury or property damage caused or incurred by CONTRACTOR, its employees, subcontractors, or agents in the performance of this Contract.

6. PAYMENT

A. AQMD shall pay CONTRACTOR a Ceiling Amount of *** upon completion of the project on a reimbursement basis. Any funds not expended upon early contract termination or contract completion shall revert to the Carl Moyer Fund or to the AQMD. Payment of charges shall be made by AQMD to CONTRACTOR within thirty (30) days after approval by AQMD of an itemized invoice prepared and furnished by CONTRACTOR.

B. An invoice submitted to AQMD for payment must be prepared in duplicate, on company letterhead, and list AQMD's contract number, period covered by invoice, and CONTRACTOR'S social security number or Employer Identification Number and submitted to: South Coast Air Quality Management AQMD, 21865 East Copley Drive, Diamond Bar, CA 91765. Attn: Leilani Montojo.

C. No funds shall be paid out to CONTRACTOR pursuant to this contract, until the project described in Exhibit "A" is completed and proof of completion is provided to AQMD. If the project described in Exhibit "A" is not completed and satisfactory proof of completion is not provided to AQMD, no monies shall be due and payable to CONTRACTOR. Proof of completion shall include emissions reduction input data needed for calculation of emissions reductions.

7. COMPLIANCE WITH APPLICABLE LAWS - CONTRACTOR agrees to comply with all federal, state, and local laws, ordinances, codes and regulations and orders of public authorities in the performance of this Contract and to ensure that the provisions of this clause are included in all subcontracts.

8. EMPLOYEES OF CONTRACTOR

A. CONTRACTOR shall be responsible for the cost of regular pay to its employees, as well as cost of vacation, vacation replacements, sick leave, severance pay and pay for legal holidays.

B. CONTRACTOR shall also pay all federal and state payroll taxes for its employees and shall maintain workers' compensation and liability insurance for each of its employees.

C. CONTRACTOR, its officers, employees, agents, or representatives shall in no sense be considered employees or agents of AQMD, nor shall CONTRACTOR, its officers, employees, agents, or representatives be entitled to or eligible to participate in any benefits, privileges, or plans, given or extended by AQMD to its employees.

D. CONTRACTOR warrants that it has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Contract. CONTRACTOR further represents that in performance of this Contract, no person having any such interest shall be employed by CONTRACTOR or any subcontractor.

9. OWNERSHIP - Title and full ownership rights to any products purchased or developed under this Contract shall at all times remain with CONTRACTOR.

10. NON-DISCRIMINATION - In the performance of this Contract, CONTRACTOR shall not discriminate in recruiting, hiring, promotion, demotion, or termination practices on the basis of race, religious creed, color, national origin, ancestry, sex, age, or physical handicap and shall comply with the provisions of the California Fair Employment & Housing Act (Government Code Section 12900, *et seq.*), the Federal Civil Rights Act of 1964 (P.L. 88-352) and all amendments thereto, Executive Order No. 11246 (30 Federal Register 12319), and all administrative rules and regulations issued pursuant to said Acts and Order. CONTRACTOR shall likewise require each subcontractor to comply with this paragraph and shall include in each such subcontract language similar to this paragraph.

11. ASSIGNMENT - The rights granted hereby may not be assigned, sold, licensed, or otherwise transferred by either party without the written consent of the other, and any attempt by either party to do so shall be void upon inception.

12. NON-EFFECT OF WAIVER - CONTRACTOR'S or AQMD's failure to insist upon the performance of any or all of the terms, covenants, or conditions of this Contract, or failure to exercise any rights or remedies hereunder, shall not be construed as a waiver or relinquishment of the future performance of any such terms, covenants, or conditions, or of the future exercise of such rights or remedies, unless otherwise provided for herein.

13. ATTORNEYS' FEES - In the event any action (including arbitration) is filed in connection with the enforcement or interpretation of this Contract, each party in said action shall pay its own attorneys' fees and costs.

14. FORCE MAJEURE - Neither AQMD nor CONTRACTOR shall be liable or deemed to be in default for any delay or failure in performance under this Contract or interruption of services resulting, directly or indirectly, from acts of God, civil or military authority, acts of public enemy, war, strikes, labor disputes, shortages of suitable parts, materials, labor or transportation, or any similar cause beyond the reasonable control of AQMD or CONTRACTOR.

15. SEVERABILITY - In the event that any one or more of the provisions contained in this Contract shall for any reason be held to be unenforceable in any respect by a court of competent jurisdiction, such holding shall not affect any other provisions of this Contract, and the Contract shall then be construed as if such unenforceable provisions are not a part hereof.

16. HEADINGS - Headings on the paragraphs of this Contract are for convenience and reference only, and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of this Contract.

17. DUPLICATE EXECUTION - This Contract is executed in duplicate. Each signed copy shall have the force and effect of an original.

18. GOVERNING LAW - This Contract shall be construed and interpreted and the legal relations created thereby shall be determined in accordance with the laws of the State of California. Venue for resolution of any dispute shall be Los Angeles County, California.

19. NOTICES - Any notices from either party to the other shall be given in writing to the attention of the persons listed below, or to other such addresses or addressees as may hereafter be designated in writing for notices by either party to the other. A notice shall be deemed received when delivered or three days after deposit in the U. S. Mail, postage prepaid, whichever is earlier.

AQMD:
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765
Attn: Carl Moyer Contracts Administrator

CONTRACTOR:

20. MOBILE SOURCE EMISSION REDUCTION CREDITS (MSERCs)

The CARB and AQMD have adopted a policy that no MSERCs resulting from the CMP may be generated and/or sold.

21. REPORTING REQUIREMENTS – Emission reductions shall be quantified on an annual basis. CONTRACTOR shall report required data to the AQMD for a minimum period of five (5) years. From the data provided, emission reductions will be calculated by the AQMD staff utilizing the most current CARB quantification methodologies. Reported and validated emission reductions shall be applied toward air quality attainment goals. All emission reductions resulting from the expenditure of these funds shall be owned wholly by the AQMD, shall not be converted into tradable credits and shall be used for the sole purpose of meeting the attainment schedule contained in the most recently adopted State Implementation Plan. AQMD reserves the right to verify the information provided.

The Contractor shall report the following data annually:

- Annual mileage or engine hours accumulated, using the contracted-for equipment within the geographical boundaries of the AQMD.

The reporting requirements under this clause shall survive the expiration of this Contract and continue in full force and effect until a minimum of five (5) consecutive years of emission data has been reported to the AQMD.

22. ENTIRE CONTRACT - This Contract represents the entire agreement between the parties hereto related to CONTRACTOR providing services to AQMD and there are no understandings, representations, or warranties of any kind except as expressly set forth herein. No waiver, alteration, or modification of any of the provisions herein shall be binding on any party unless in writing and signed by the party against whom enforcement of such waiver, alteration, or modification is sought.

DISTRICT: South Coast Air Quality Management DISTRICT
21865 East Copley Drive
Diamond Bar, CA 91765
Attn: Carl Moyer Contracts Administrator

CONTRACTOR:

IN WITNESS WHEREOF, the parties to this Contract have caused this Contract to be duly executed on their behalf by their authorized representatives.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

By: _____
Barry R. Wallerstein, D.Env.
Executive Officer

By: _____
William A. Burke, Ed.D.,
Chairman of the Board

Date: _____

Date: _____

ATTEST:
Jackie Dix, Clerk of the Board

By: _____

APPROVED AS TO FORM:
Barbara Baird, District Counsel

By: _____

ATTACHMENT A
CERTIFICATIONS AND REPRESENTATIONS

State of Incorporation and Tax Standing

1. If the Contractor is a corporation please list your state of incorporation
_____.
2. The Contractor hereby attests that it is in good tax standing with the State of California as of the date set forth below.

Company Name and Address:

Name of Authorized Representative

Title

Date

To Whom It May Concern:

Federal Income Tax Law requires our District to file information returns for “services rendered” by certain individuals and others. The code provides that the Taxpayer Identification Number of the “payment recipient” (you) must be furnished upon request to the “service recipient” (us).

According to the regulations, effective January 1, 1984, if the payee fails to provide the Correct ID Number, payments may be subject to 20percent Backup Federal Income Tax Withholding by our District, and the payee is further subject to a penalty of \$50.00 by the IRS.

In order to help us comply with our reporting responsibilities and to protect yourself from withholding or penalty, please provide the following information and complete the attached W-9 form, and return both documents.

1. NINE DIGIT
Federal Identification No. _____
or
Social Security No. _____
2. ENTITY (check one)
Individual _____
Corporation _____
Partnership _____
Sole Proprietorship _____
Other (specify) _____

Signature

Date

Title

Note: Writing "Applied For" on the form means that you have already applied for a TIN OR that you intend to apply for one soon.

As soon as you receive your TIN, complete another Form W-9, include your TIN, sign and date the form, and give it to the requester.

Penalties

Failure To Furnish TIN.—If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil Penalty for False Information With Respect to Withholding.—If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal Penalty for Falsifying Information.—Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs.—If the requester discloses or uses TINs in violation of Federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Name.—If you are an individual, you must generally enter the name shown on your social security card. However, if you have changed your last name, for instance, due to marriage, without informing the Social Security Administration of the name change, please enter your first name, the last name shown on your social security card, and your new last name.

Sole Proprietor.—You must enter your individual name. (Enter either your SSN or EIN in Part I.) You may also enter your business name or "doing business as" name on the business name line. Enter your name as shown on your social security card and business name as it was used to apply for your EIN on Form SS-4.

Part I—Taxpayer Identification Number (TIN)

You must enter your TIN in the appropriate box. If you are a sole proprietor, you may enter your SSN or EIN. Also see the chart on this page for further clarification of name and TIN combinations. If you do not have a TIN, follow the instructions under **How To Get a TIN** on page 1.

Part II—For Payees Exempt From Backup Withholding

Individuals (including sole proprietors) are not exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends. For a complete list of exempt payees, see the separate Instructions for the Requester of Form W-9.

If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding. Enter your correct TIN in Part I, write "Exempt" in Part II, and sign and date the form. If you are a nonresident alien or a foreign entity not subject to backup withholding, give the requester a completed **Form W-8**, Certificate of Foreign Status.

Part II—Certification

For a joint account, only the person whose TIN is shown in Part I should sign.

1. Interest, Dividend, and Barter Exchange Accounts Opened Before 1984 and Broker Accounts Considered Active During 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, Dividend, Broker, and Barter Exchange Accounts Opened After 1983 and Broker Accounts Considered Inactive During 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real Estate Transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other Payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified of an incorrect TIN. Other payments include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services, payments to a nonemployee for services (including attorney and accounting fees), and payments to certain fishing boat crew members.

5. Mortgage Interest Paid by You, Acquisition or Abandonment of Secured Property, Cancellation of Debt, or IRA Contributions. You must give your correct TIN, but you do not have to sign the certification.

Privacy Act Notice

Section 6109 requires you to give your correct TIN to persons who must file information returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. You must provide your

TIN whether or not you are required to file a tax return. Payers must generally withhold 31% of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to a payer. Certain penalties may also apply.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Custodian account of a minor (Uniform Gift to Minors Act)	The minor ²
4. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
5. Sole proprietorship	The owner ³
For this type of account:	Give name and EIN of:
6. Sole proprietorship	The owner ³
7. A valid trust, estate, or pension trust	Legal entity ⁴
8. Corporate	The corporation
9. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
10. Partnership	The partnership
11. A broker or registered nominee	The broker or nominee
12. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity

¹ List first and circle the name of the person whose number you furnish.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name, but you may also enter your business or "doing business as" name. You may use either your SSN or EIN.

⁴ List first and circle the name of the legal trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.



EPA Project Control Number

United States Environmental Protection Agency
Washington, DC 20460

Certification Regarding Debarment, Suspension, and Other Responsibility Matters

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

☐ I am unable to certify to the above statements. My explanation is attached.

EPA Form 5700-49 (11-88)

INSTRUCTIONS

Under Executive Order 12549, an individual or organization debarred or excluded from participation in federal assistance or benefit programs may not receive any assistance award under a federal program, or a subagreement thereunder for \$25,000 or more.

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement Participant thereunder must complete the attached certification or provide an explanation why they cannot. For further details, see 40 CFR 32.510, Participants' responsibilities, in the attached regulation.

Where To Submit:

The prospective EPA grant, loan, or cooperative agreement recipient must return the signed certification or explanation with its application to the appropriate EPA headquarters or regional office, as required in the application instructions.

A prospective prime contractor must submit a completed certification or explanation to the individual or organization awarding the contract.

Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

How To Obtain Forms:

EPA includes the certification form, instructions, and a copy of its implementing regulation (40 CFR Part 32) in each application kit. Applicants may reproduce these materials as needed and provide them to their prospective prime contractors, who, in turn, may reproduce and provide them to prospective subcontractors.

Additional copies/assistance may be requested from:

Compliance Branch
Grants Administrative Division (PM-216F)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460
Telephone: 202/475-8025

**FY 2003
THE CARL MOYER MEMORIAL
AIR QUALITY STANDARDS ATTAINMENT PROGRAM**

AQMD RFP #P2004-04

APPENDICES

The attached Appendices contain the Project Applications, as well as Background Information, Selection Criteria and Example Calculations for each of the project categories. The AQMD staff contact for all project categories is Connie Day at (909) 396-3055 or cdav@aqmd.gov.

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